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NUTRALICA® Healthcare Institute dispose d'une importante banque de données scientifiques relatives aux antioxydants, vitamines, minéraux, oligoéléments, acides aminés, acides gras, fibres prébiotiques, probiotiques, phytomicronutriments,...

NUTRALICA® Healthcare Institute, en tant qu'institut, est à la disposition des Professionnels de la santé pour toute information qu'ils souhaiteraient en matière de Nutrition et de Nutrithérapie

Nutritional Press Release: Lutéine & Cognition.

La lutéine, la méso-zéaxanthine, les pigments de la macula, sont aussi présents dans le cerveau : cortex occipital, cortex frontal, cortex cérébelleux.

Nutr Neurosci. 2015 Mar 9. [Epub ahead of print]

Macular pigment carotenoids in the retina and occipital cortex are related in humans.
Vishwanathan R, Schalch W, Johnson EJ.

Abstract:
Objectives Lutein and zeaxanthin are dietary carotenoids that preferentially accumulate in the macular region of the retina. Together with meso-zeaxanthin, a conversion product of lutein in the macula, they form the macular pigment. Lutein is also the predominant carotenoid in human brain
tissue and lutein status is associated with cognitive function in adults. The study objective was to evaluate the relationship between retinal and brain lutein and zeaxanthin in humans. Methods Donated brain tissue (occipital cortex and hippocampus) and matched retina were obtained from the National Disease Research Interchange, a national human tissue resource center which adheres to strict consent and confidentiality procedures. Decedents were men and women aged >50 years who either had normal cognitive function or Alzheimer's disease. Tissues were analyzed using standard lipid extractions followed by analysis on reverse-phase high performance liquid chromatography (HPLC) and normal-phase HPLC (for meso-zeaxanthin). Results Macular pigment carotenoids
(lutein, meso-zeaxanthin, and zeaxanthin combined) in the retina were significantly related to the combined concentrations of lutein and zeaxanthin in the occipital cortex. When analyzed separately, only retinal lutein (plus meso-zeaxanthin), not zeaxanthin, was significantly related to lutein in the occipital cortex. No correlations were observed with lutein and zeaxanthin in the hippocampus. Discussion Total macular pigment density measured via non-invasive, psychophysical techniques can be used as a biomarker to ascertain brain lutein and zeaxanthin status in clinical studies.

Nutr Neurosci. 2013 Jan;16(1):21-9. doi: 10.1179/1476830512Y.0000000024. Epub 2012 Jul 9.
Macular lutein and zeaxanthin are related to brain lutein and zeaxanthin in primates

Vishwanathan R[1], Neuringer M, Snodderly DM, Schalch W, Johnson EJ.

RESULTS:
Lutein in the macula and annulus was significantly related to lutein levels in the cerebellum, occipital cortex, and pons, both in bivariate analysis and after adjusting for age, sex and n-3 fatty acid status. In the frontal cortex the relationship was marginally significant. Macular zeaxanthin was significantly related to zeaxanthin in the cerebellum and frontal cortex, while the relationship was marginally significant in the occipital cortex and pons in a bivariate model.

Nutritional Press Release: Lutéine & Cognition.

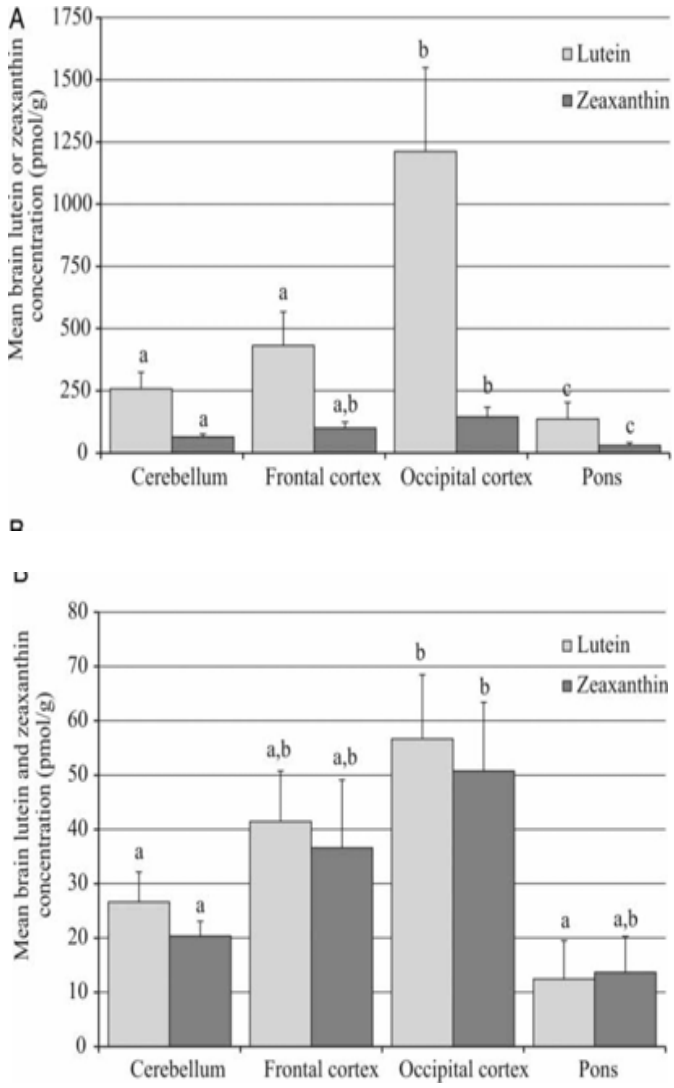


Figure 1 Mean (±SEM) concentrations of lutein and zeaxanthin in the cerebellum, frontal cortex, occipital cortex, and pons. Columns labeled with different letters (a, b, or c) represent means that are significantly different at P < 0.05, while those labeled with the same letters represent means that are not significantly different from one another (evaluated independently for lutein and zeaxanthin). (A) Xanthophyll-free monkeys fed pure lutein or pure zeaxanthin. Lutein was detected in the brain tissue of the lutein-fed monkeys only, and zeaxanthin was detected in the brain tissue of the zeaxanthin-fed monkeys only. (B) Monkeys fed stock diet. Note that the y-axis scale is different from Fig. 1A; lutein and zeaxanthin concentrations are 10–20 times lower for stock diet-fed monkeys.

J Pediatr Gastroenterol Nutr. 2014 Nov;59(5):659-65. doi: 10.1097/MPG.0000000000000389.

Lutein and preterm infants with decreased concentrations of brain carotenoids.

Vishwanathan R1, Kuchan MJ, Sen S, Johnson EJ.

Abstract:

OBJECTIVES:

Lutein and zeaxanthin are dietary carotenoids that may influence visual and cognitive development. The objective of this study was to provide the first data on distribution of carotenoids in the infant brain and compare concentrations in preterm and term infants.

RESULTS:

Lutein, zeaxanthin, cryptoxanthin, and β-carotene were the major carotenoids found in the infant brain tissues. Lutein was the predominant carotenoid accounting for 59% of total carotenoids. Preterm infants (n = 8) had significantly lower concentrations of lutein, zeaxanthin, and cryptoxanthin in their brain compared with term infants (n = 22) despite similarity in postmenstrual age. Among formula-fed infants, preterm infants (n = 3) had lower concentrations of lutein and zeaxanthin compared with term infants (n = 5). Brain lutein concentrations were not different between breast milk-fed (n = 3) and formula-fed (n = 5) term decedents. In contrast, term decedents with measurable brain cryptoxanthin, a carotenoid that is inherently low in formula, had higher brain lutein, suggesting that the type of feeding is an important determinant of brain lutein concentrations.

CONCLUSION:

These data reveal preferential accumulation and maintenance of lutein in the infant brain despite underrepresentation in the typical infant diet. Further investigation on the impact of lutein on neural development in preterm infants is warranted.

Nutritional Press Release: Lutéine & Cognition.

La faible teneur en lutéine et zéaxanthine observée dans la DMLA, peut être associée à la perte de la fonction cognitive.

Nutr Rev. 2014 Sep;72(9):605-12.

Role of lutein and zeaxanthin in visual and cognitive function throughout the lifespan.

Johnson EJ[1].

Abstract:

The relationship between lutein and zeaxanthin and visual and cognitive health throughout the lifespan is compelling. There is a variety of evidence to support a role for lutein and zeaxanthin in vision. Lutein's role in cognition has only recently been considered. Lutein and its isomer, zeaxanthin, are taken up selec ely into eye ssue. Lutein is the predominant carotenoid in human brain ssue. Lutein and zeaxanthin in neural ssue may have biological effects that include an oxida on, an -inflamma on, and structural ac ons. In addi on, lutein and zeaxanthin may be protec ve against eye disease because they absorb damaging blue light that enters the eye. In pediatric brains, the rela ve contribu on of lutein to the total carotenoids is twice that found in adults, accoun ng for more than half the concentra on of total carotenoids. The greater propor on of lutein in the pediatric brain suggests a need for lutein during neural development as well. In adults, higher lutein status is related to be er cogni ve performance, and lutein supplementa on improves cogni on. The evidence to date warrants further inves ga on into the role of lutein and zeaxanthin in visual and cogni ve health throughout the lifespan

Neurobiol Aging. 2014 Jul;35(7):1695-9.

Relationships between macular pigment optical density and cognitive function in unimpaired and mildly cognitively impaired older adults.

Renzi LM[1], Dengler MJ[2], Puente A[3], Miller LS[3], Hammond BR Jr[4].

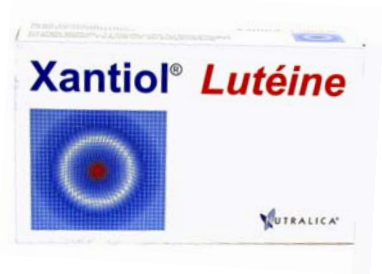
Abstract :

Low carotenoid status (especially of the xanthophylls, lutein [L], and zeaxanthin [Z]) is common in older adults and has been associated with a number of degenerative diseases of the central nervous system ranging from retina (e.g., macular degenera- tion) to brain (e.g., Alzheimer's disease). In this study, we tested whether retinal measures of L + Z (macular pigment optical density [MPOD]), used as a surrogate for brain L + Z levels, were related to cognitive function when comparing healthy older adults with mildly cognitively impaired older adults. Twenty-four subjects with mild cognitive impairment were compared with 24 matched controls. Subjects were matched with respect to age, body mass index, ethnicity, sex, and smoking status. Degree of cognitive impairment and cognitive ability was determined via structured clinical interview. MPOD was measured psychophysi-cally. In healthy older adults, MPOD was only related to visual-spatial and constructional abilities ($p = 0.04$). For subjects with mild cognitive impairment (MCI), however, MPOD was broadly related to cognition including the composite score on the mini-mental state examination ($p = 0.02$), visual-spatial and constructional abilities ($p = 0.04$), language ability ($p = 0.05$), attention ($p = 0.03$), and the total scale on the Repeatable Battery for the Assessment of Neuropsychological Status ($p = 0.03$). It is possible that L/Z status may be more strongly related to cognition when individuals are considered with established onset of cognitive decline.

Nutritional Press Release: Lutéine & Cognition.

.J Gerontol A Biol Sci Med Sci. 2015 Aug 18.

Ces études récentes montrent l'intérêt d'une supplémentation en lutéine et zéaxanthine dans les troubles de la cognition corrélés aux maladies dégénératives oculaires.



DHA - Zinc : Pour maintenir une fonction cognitive et cérébrale normale.

DHA - Zinc : Pour maintenir une fonction visuelle normale.

Zinc : Pour contribuer à un métabolisme normal des glucides, des acides gras, de la vitamine A.

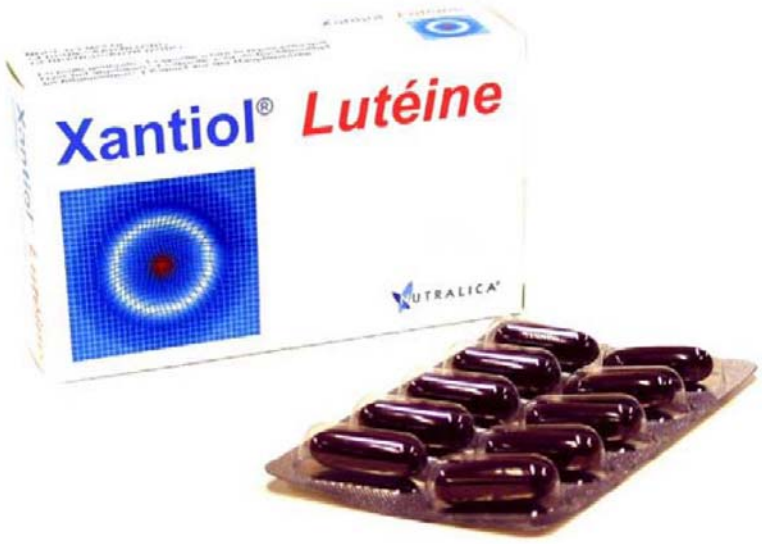
Sélénium - Zinc - Vit E : Pour protéger les cellules du stress oxydant.

Pour toute information sur la ***Lutéine***, consultez

www.nutralica.eu

Dans les troubles métaboliques et visuels :

Xantiol *Lutéine*



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